

# The Cornell Countryman

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## BREEDING OF HORSES BY THE U. S. GOVERNMENT

*By G. Arthur Bell*

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THE breeding of carriage horses by the United States Department of Agriculture in cooperation with the Colorado Agricultural Experiment Station was begun in December 1904 by the purchase of six mares from a Wyoming breeder. In February 1905 the second purchase was made consisting of the Standard-bred stallion Carmon (formerly shown as Glorious Thundercloud), and twelve mares. Since then six mares have been purchased in Kentucky.

The object of the work in Colorado is to evolve a breed of carriage horses from American material. The attainment of this object is considered highly probable because of the large number of American bred carriage horses which win at the National and other horse shows in this country. As examples, may be mentioned the remarkable show records of such horses as Lord Brilliant, Glorious Red Cloud, Lord Baltimore, Nala, and Avondale. Nala won the gig cup at the National Horse Show at Madison Square Garden three years in succession, winning in 1907, 1908, and again in 1909, which record, I believe, has never been equaled by any other horse in the gig class at that show. In 1909 Nala, with his stable mate Avondale (both trotting-bred carriage horses), won first at the National show in one of the best tandem classes ever seen in this country.

It has been said that the production of horses like those mentioned was an accident. In many cases this is true in that such horses were not bred for the market or show ring as carriage horses, but were bred for the race track. Not having enough speed to be profitable on the track, but possessing the necessary requisites for carriage purposes, they were sold to be developed as carriage horses. The frequency, however, with which the production of high class carriage horses has occurred, indicates that it is possible to produce horses in abundance from our native stock having the requisite conformation, quality, style, and action, providing a systematic effort is made to do so. Until the Department undertook this work no consistent, systematic, and long continued effort had ever been made. Our trotting horse breeders have for the most part selected for speed and for speed alone, neglecting such characteristics as are essential in the carriage horse. This has resulted in a breed of horses of great stamina and endurance, but as a class lacking in beauty, high action, and conformation.

In order to meet the demand for horses possessing these characteristics, large importations of foreign carriage and coach breeds such as the Hackney, French and German coach have been made. None of these, except the Hackney, has gained any considerable foothold in this country. While the Hackney has been bred for generations

for carriage purposes, the American horse has been able to compete successfully with this breed in the show ring. This has not been done, however, except at a great cost to the horse breeding industry. Some of the very best young stallions and mares, not being appreciated by the owners who were breeding solely for speed, have been sold and developed for the market and show ring without having had an opportunity to demonstrate their value in the stud. It is hoped that the Department's work will have a tendency to counteract this sacrifice by bringing to the minds of our horse breeders the fact that our native stock possesses other qualities which are just as valuable, if not more so, than speed.

The development of the American carriage horse must come largely (for the present at least), from the selection of horses having the qualities desired, rather than from the selection according to breeding, because at present only a part of the blood lines which produce the desired type are definitely known. Therefore, the Department in making the original selections and in culling the progeny, has given more consideration to individuality than to breeding. It is expected that it will take several years to establish a breed that will breed reasonably true to type, but I believe that eventually the horse breeders of this country will be producing carriage horses from native stock that will be vastly superior, especially in speed and endurance, to any of the imported breeds, and at a much smaller outlay than is now necessary in the importation of horses from Europe.

Carmen, the stallion at the head of the carriage horse stud, is a beautiful bay in color, 16 hands in height, and weighs about 1200 pounds. Most of the mares are either bay or brown in color, and range in height from about 15:2 to 16 hands, and in weight about 1050 or 1200 pounds. The stud is located on the Colorado Station property at Fort Collins, and at

present consists of the stallion Carmen, 2 four-year-old stallions, 1 three-year-old stallion, 2 two-year-old stallions, 21 brood mares, 7 four-year-old mares, 5 three-year-old fillies, 6 two-year-old fillies, and 14 foals of 1909; a total of 59 animals.

#### MORGAN HORSE BREEDING

The breeding of Morgan horses in cooperation with the Vermont Agricultural Experiment Station, was started in June 1906, when seven mares and two fillies were purchased in Vermont. A few months later two mares were purchased in Kentucky. In July 1907, General Gates was purchased. Since then four mares have been added to the stud.

The object of the Vermont work is to preserve the Morgan type at its best, including the conformation, endurance, and ruggedness for which they have been noted. These qualities have been largely overlooked by our light horse breeders in the desire to produce horses possessing extreme speed.

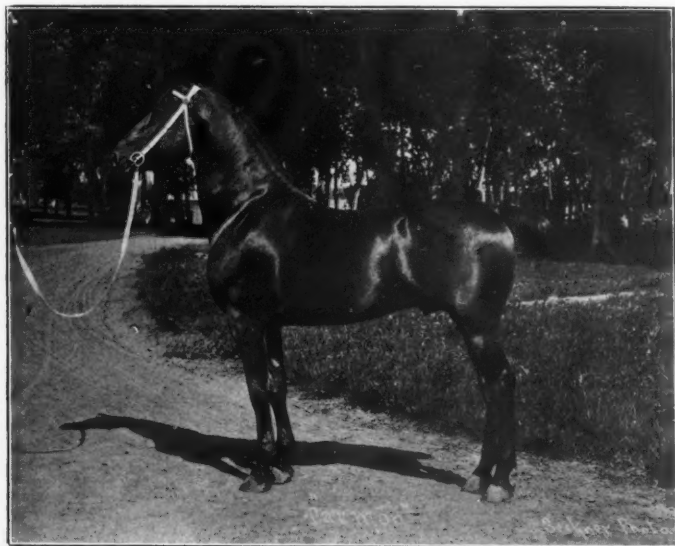
In making the original selections and in culling the progeny, careful attention has been given not only to type, but also to that of action and trueness of gait, no animals being retained which have any tendency to pace or to mix gaits. An effort is also being made to increase the size, but type will not be sacrificed for size. I see no reason, however, why it is not possible to retain the Morgan type and produce a horse standing 15:2, if careful selections are made.

The Morgan stud is located at Middlebury, Vermont, on a 400 acre farm which was presented to the Department in 1907 by Mr. Joseph Battell of Middlebury. General Gates, the stallion at the head of the stud, is a black horse standing 14:2 1/2 hands in height, and weighing about 1000 pounds. He was purchased not alone on individuality but also on his proved ability as a sire of the desired type, for he has stood for several years in Addison County, and mated to mares of various types, he

has sired foals of outstanding excellence. The mares are either bay, brown, or chestnut in color, ranging in height from about 15 to 15:2 hands and averaging 1000 to 1100 pounds. At present the stud consists of General Gates, 1 four-year-old stallion, 1 two-year-old stallion, 13 brood mares, 2 four-year-old fillies, 3 three-year-old fillies, 2 two-year-old fillies, and 11 foals of 1909; a total of 34 animals.

The horse breeding work of the Department has not been in operation long enough to show much in the way of direct results. The interest, however, which is being taken in this work all over the country, and the

number of persons who have taken up the breeding of carriage and Morgan horses in the last few years, is very gratifying. It is also encouraging to note that some fifteen state fairs in 1909 offered substantial prizes for American carriage horses. In order to be eligible to compete for these prizes it was necessary that the animals should be registered or eligible to registration in either the American Trotting Register, in the American Morgan Register, or in the American Saddle Horse Register. In most instances the exhibits were very satisfactory and in many cases were much better than had been anticipated.



CARMON 32917, STANDARD BRED CARRIAGE STALLION AT THE  
HEAD OF THE GOVERNMENT STUD AT FORT COLLINS,  
COLO.

## BREEDING HUNTERS ON THE FARM

*By Carl W. Gay*

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IT IS an accepted fact, not easily disputed, that, generally speaking, the horse for the farmer to breed is the drafter. However, exceptions prove all rules and there are, no doubt, some farmers so situated that they could, with advantage produce some other type.

The horse markets show a variation in the classes of horses demanded, from time to time, which makes it necessary to possess an intimate knowledge of present requirements, with foresight as to their continuance, in order to be able to plan and follow out a particular line of breeding, which will be profitable. Present indications of the sentiment of horse users seems to favor, for some time to come, the saddle horse, and, more particularly, the sub-type of the saddle group, termed the hunter.

Fox hunting, like horse racing, is usually tabooed as altogether foreign to the farmers' interests, and yet, some of the reasons given for assigning to the draft horse premier position in the farmer's estimation, hold good for the hunter as well.

In the first place, let it be understood that the prices paid for green horses suitable to make hunters are in excess of those paid for draft horses of corresponding merit. Furthermore, the hunter most generally in demand at the present time is characterized by size and substance which must be derived from the dams, in most instances, since the majority of hunter sires are thoroughbred, and clean thoroughbred hunters, while preferred by many, are not, as a rule, up to heavy weight. Therefore, the stamp of mare most suitable for the production of a high class of hunters is such as permits of her being capable of work and useful about the farm also. Then, again, if an intelligent line of breeding is followed there is probably a greater likelihood of

securing a marketable product, or in other words, a better chance for success in breeding the hunter type, than in the case of any other type except the drafter. For instance, if a reasonable price is paid for a horse, which, on account of his type, conformation and breeding, gives promise of becoming a hunter, and with proper schooling takes kindly to the jumps and eventually qualifies, he may realize a very generous margin of profit for his purchaser. If, however, he fails to meet the jumping requirements, but develops good manners and an ability to carry weight well, he will make a very satisfactory road hack, or a walk-trot-canter saddle horse. Finally, failing in all these, there is still the chance left that he will make a road horse, to go in harness, for which a material advance over his original cost can be secured. With these greater possibilities making the investment a safer one, the producer of such a prospect will find the buyer more liberal than in the case of a road or heavy harness horse, in which the element of pace uncertainty is much greater.

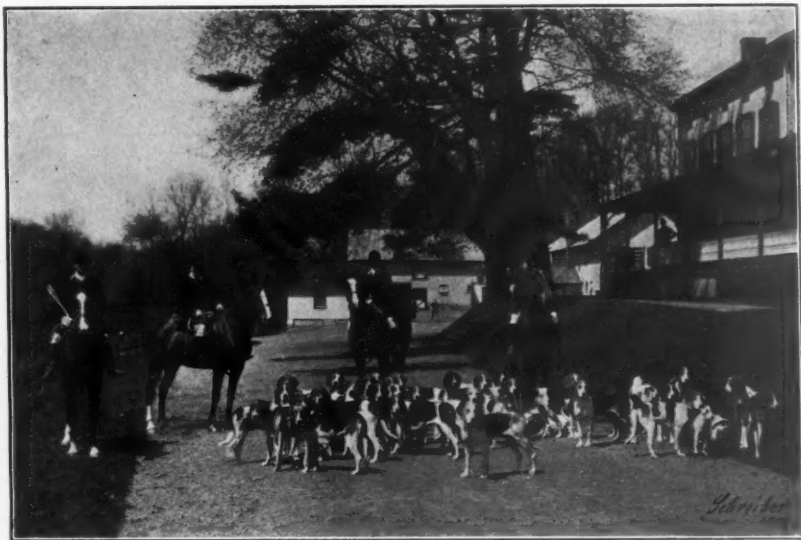
Conceding then, that the hunter is a fair business proposition for some especially favored farmers, it becomes important to know what sort of a horse it is and how it is best produced, in order that each one may solve the problem of whether or not it is the horse for him to breed.

The performance required of the hunter is to carry weight, safely, over any ordinary hunting country, at a pace determined by that of the hounds and for a distance limited only by the termination of the chase. Such exacting requirements can be met only by the horse which possesses size and substance, good conformation, a courageous but cool head, ability to jump at least four rails, to gallop fast, and

to stay through all kinds of going and for all day, perhaps. In fact, the race horse is not subjected to a more severe endurance test than is the hunter and the latter's performance is the more trying because more varied in nature.

The importance of size in the hunter is being emphasized more and more by those who create the demand for this type of horse, and other things being equal, the big hunter com-

horse is safer over timber for the simple, physical reason that his momentum is greater, thereby causing the rail or fence to give, or break, and allowing him to go through without a fall, while the resistance offered by the same rail to a lighter horse would be sufficient to trip him and bring him down. The one objection to too much size is that such a horse may not be as fast as the lighter, more racy made individual, but as a



#### A TYPICAL HUNT

M. F. H. (Master of Fox Hounds), Huntsman, First and Second Whips with Pack and Mascot.

mands the larger price, and meets with a more ready sale, at that. There are three very good reasons for favoring the large horse. First: Many of the men who hunt ride at a weight over one hundred and sixty-five pounds, which is the maximum limit of light weight requirements; therefore, it requires a horse of size to be "up to weight," notwithstanding the fact that size alone is not the only essential to weight carrying ability. Second: As a rule, a five foot jump is six inches easier for a 16.2 hand horse than for one which stands but 15 hands. Third: The heavy

rule he is fast enough for any but the most open country. In England and Ireland, where a distinct type has been established, fast galloping is secondary to size, stamina and safe negotiation of ordinary obstacles. Nor is high jumping a factor to satisfactory performance after hounds. The horse which can consistently clear four feet six, hunts better than the erratic jumper which will, under compulsion, get over six or seven feet but at another time goes crashing through an ordinary four bar gate.

The temperament and disposition of the hunter are such as to commend



him, over the race horse, for the average man to handle. While it requires the greatest amount of courage in a horse to meet the requirements of the hunting field, yet a cool, level head and a high degree of intelligence are fundamental to the safe and comfortable conveyance of the huntsman. He must "take hold" just enough to inspire confidence in the rider, stand for "company" when running the fox, submit to frequent "checks" as occasion may demand, take his jumps philosophically, rating them accurately, and with all, finally bring his rider in at the "kill" or the "hole" in good order.

In England and Ireland they have evolved what might be called a breed of hunters, the type being fixed and transmitted with fair uniformity. In this country, on the other hand, most of our hunters are produced by a system of cross breeding, with the Thoroughbred almost invariably used as the top cross. Virginia is the great hunter producing state, in the same way that Kentucky stands pre-eminent as a source of the best of our park saddle and light harness horses. In the Eastern and New England States the measure of a horse's excellence is generally one of speed, while in the Middle West the recommendation which seems to mean most is that a pair of horses weigh three thousand pounds or more; but in Virginia the universal question of the prospective buyer seems to be "How much can he jump?". The mating, from which these Virginia hunters are produced, is of a big boned, stout made, good tempered Thoroughbred stallion, with large, strong, sound mares ranging in breeding, from part to full Thoroughbred, or the biggest trotting bred mares, to some with a predominance of draft blood, but of the lighter, more active sort. Many a good, grade Percheron mare, in Virginia, is bred to a Thoroughbred horse, of the stamp already described, with the view of producing a heavy weight hunter, if the best prospects are realized, or a salable market

horse, of the expresser type, in case these prospects fall short of full realization. It is claimed that a most useful cross country horse is produced in Britain by a Thoroughbred sire out of small, good going Clydesdale dams.

It would be most unwise, of course, to recommend the mating of good draft mares to Thoroughbred stallions under any consideration, but there are a certain class of off type mares of some draft blood, which, experience has shown, will give better results from the Thoroughbred cross than by going to the other extreme and using the big, massive, ton stallion. The point that mares of this class, together with large, well made, grade trotting mares, may be used in the production of hunters, is made to illustrate the fact that the mares, from which it is possible to produce good hunter material, are entitled to more of a place on the farm than the dams of any other type of market horse, save the drafter. As a matter of fact, there are many farms in the Eastern States, within the territory covered by buyers of hunters, to the working of which the active, handy 1200 to 1400 pound horse is better adapted than is the 1600 or 1800 pound drafter. Here, from the farm horses, if they be mares of the right sort, a class of colts can be produced for which there is the strongest demand, at most satisfactory prices. In some of these localities, too, the class of Thoroughbred stallions, available to the mare owners, is superior to that of the draft stallions whose services are at their command. To these the breeding of hunters may be recommended.

There is also another, less material light in which to view the practicability of breeding hunters on the farm. Commissions on country life and students of rural economics are agreed that one of the most urgent needs of the majority of our agricultural population is more time devoted to recreation. Can there be a more normal or appropriate form of recrea-

tion for those to whom it is possible than fox hunting? A great many of the more prosperous farmers of Chester and Delaware Counties in Pennsylvania, for instance, ride regularly to the hounds of the different hunt clubs about Philadelphia and regard each season's hunt breakfast, held especially in their honor, as a most important social event. Others maintain and hunt packs of their own, as is done extensively in Great Britain and Australia. Furthermore, the horses which they ride do not require to be carried through the interim between seasons at a dead loss but make very useful hack-about road horses for either riding or driving. Indulgence in the sport by the breeder himself

also makes possible the schooling and finishing of his own raw material, as it were, which, in itself, is an additional source of a very substantial profit.

It may, therefore, be concluded, that, to those who cannot find a place in their farm work for mares big enough to be the dams of high class draft geldings and who have the proper type of Thoroughbred stallions within reach, the hunter may be commended as a horse, the production of which offers a most attractive and profitable line of breeding; but in so doing the draft horse is not in the least discounted as the best, all round proposition in the line of horse breeding for the average farmer.

## THE IMPORTATION OF HORSES

*By James B. McLaughlin*

Columbus, O.

THE horses in America owe their qualities, good, bad or indifferent, to the horses of Europe, for they are all the descendants of animals imported from that country. The first importations were made by the Spaniards. The wild horses of the west—the so-called Indian ponies—are the degenerated descendants of those early importations.

During the early centuries of our history, horses were imported only for service, for the work that they could do, and that work was mostly under saddle. Reproduction was a secondary consideration. The soil was fertile; it did not require thorough cultivation. Time was not an object and the ox did the work. The first importations for the improvement of the horses were made only about a century ago. They were made to improve the speed qualities of the horses. This was done persistently until today we have the fastest trotters in the world.

The first importations for the improvement of the draft qualities in our horses were made within the

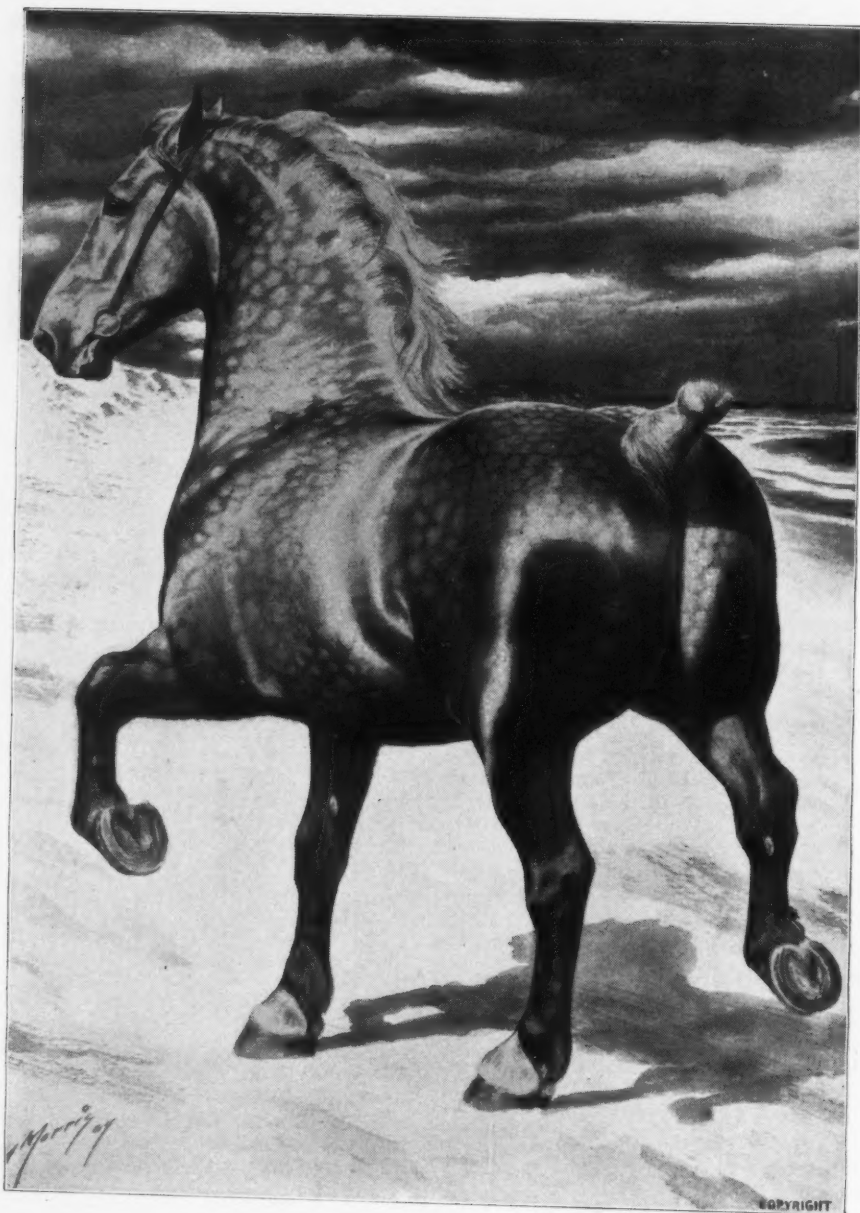
memories of men living today. In fact, it has practically all been done in the past forty years.

With as persistent effort in draft lines as we have used in producing trotters, we should be able to astonish the world with our draft horses.

The first importations of draft stallions, which created a furor in this country because of the excellence of their produce, came from France.

The farmers, especially of the middle west, saw at once the great utility of the half blood produce of these stallions. They found out not only the great economy that they gave them in their motive power, but that they could more thoroughly cultivate their heavy lands with these big horses. The haulers of heavy loads in the cities found that they could transport twice as much with the big horses as with the small horses that they had been using and were eager to pay double the price for the big horses.

Speaking the English language, our breeders naturally sought the draft breeds of Great Britain on



PERCHERON STALLION GABION (72011) 43278.

Courtesy of McLaughlin Bros.



account of the fact that they could purchase them in that country without the intervention of an interpreter.

Whether on account of our climate, or because the British horse does not cross so well with our native mares, the fact remains today that the Percheron is the best liked and most sought after draft horse in America. The Percheron has been bred to all sorts of mares from Maine to California and from Minnesota to Texas. His progeny are so much sought after that the importers can not find enough good stallions to meet the demands.

The Percheron is bred in his purity in the little district of La Perche, in North Western France. It is without question the most famous horse breeding section in the world, and, owing to its breed of horses, is undoubtedly the most prosperous agricultural section in the world.

Nogent-le-Rotrou, an old town of about 10,000 inhabitants, is located about 100 miles south west of Paris. It is the ancient capital of La Perche and is the most important town within its borders. It is located in about the middle of the Percheron district, which is about eighty miles long by about fifty in width. In order to be recorded in the Percheron Stud Book of France, animals must be foaled in this district. The produce of pure bred Percheron mares sired by pure bred Percheron stallions, dropped in any other section of France, cannot be recorded.

The Percheron breeders claim that the Percheron can only be bred in his highest estate within this limited section. We must acknowledge that there is a great deal of truth in their contention. For many years Percheron stallions have been used to improve the draft breeds of the other sections of France. Percheron mares have been taken to these sections as well. Yet, at the present time, we do not find in any other section of France horses the equal of those bred in the Percheron district, either in size, bone or quality.

While we can successfully raise draft horses in almost every state in the Union, yet I believe it will always be necessary for us to get fresh blood from the Percheron district in order to keep up the size and bone of our American bred horses.

Unfortunately, the Percheron district does not breed enough horses to supply the demands made upon it. On account of the fact that almost none of the American importers speak French, they were at the mercy of the interpreters, who either take them outside the Percheron district, or, through connivance with some party living in the Percheron district, show them horses that resemble some what the true Percheron and sell them these imitation Percherons as pure specimens of the breed.

This is being carried on to such an alarming extent at the present time that a large number of the animals now being imported from France as Percherons are not pure bred Percherons.

## OUTLOOK FOR HORSE INDUSTRY EAST

*By M. W. Harper*

Assistant Professor of Animal Husbandry, New York State College of Agriculture

**A**MERICA is a horse loving nation and the Americans have learned to substitute brute for human energy to a greater extent than any other people. In the United States the horse population is one-fourth that of the human population, or there is one horse for every four inhabitants. This is two and one-half times as great as the

proportion of horses to men in France; three times greater than in Germany, and six times greater than in England. Americans were very early taught that human muscle was the dearest material from which to secure energy, even if the person was a slave. A horse properly directed is equal in productive energy to ten men, and it

will cost about half as much to keep him as it will one man. Therefore, a horse intelligently handled may be made to cheapen labor twenty fold over the old hand method. Here lies the secret of success in America. Human muscle, however cheap, can never successfully compete with improved implements operated by well bred horses, adapted to their work, and directed by intelligent workmen.

On examining the statistics to learn the distribution of our horses, one is particularly impressed with the small number of horses in the east as compared with the increased percentage

established in the east before the introduction of the draft horse into the United States, which occurred about fifty years ago, or whether the environment is more suited for smaller horses. Whatever may be the reason, one thing seems certain, that the phenomenal development of the central west has been in a large measure related to the application of more efficient horse power in the production and marketing of farm crops. The draft horse has been a factor in this development. In the west the efficiency of the horse as a motive power has been raised to such an extent as to



A PURE BRED PERCHERON MARE—PRINCESS, AND FOUR OF HER GET.

of our population. The State of New York, for example, contains about one tenth of the human population of the country and only about one-twentieth of the horse population. Furthermore, when we study the type and size of horses east and west we note quite a difference. East of Ohio there are few draft horses in the rural communities. They seem to be mostly of trotting blood and occasionally one of Morgan type. West we note the ponderous drafter. It would be interesting to know, if it were possible, the influences which have led the eastern farmer to stick largely to the lighter type of horse. It would be interesting to know whether this was due to the fact that the lighter horses became

reduce the number of men as well as the number of horses required to do a given amount of work: thus giving a larger production per unit of human effort and per acre of land, which makes labor more valuable and raises the value of the land.

From the statistics it is noted that the United States must raise eight colts from each 100 horses in order that the supply keep pace with the demand. In other words if the United States, as a whole, does not produce eight colts for each 100 horses the horse population of the country must decrease. We note from the same statistics that the eastern states, New England, New York and Pennsylvania fall far short of producing the

eight colts, and that these eastern states only produce about 3.5 colts for each 100 horses. From these figures, we must draw two conclusions; either the east is not consuming as many horses as the Union at large, or horses are being purchased in the west and shipped east for consumption. We know that the latter conclusion is true because of the many large horse markets in the east. The exact number of horses shipped from the west to

your attention is that the money was taken off the eastern farm and put on the western. The east pays tribute to the west.

Now we have the facts squarely before us. The east for some reason, which is not clear, has not taken up with the heavier horses but has retained the lighter and more active type. Again, we note the east is not breeding horses to any extent but is buying a large part of the horses con-



A WELL PROPORTIONED AND PLEASING DRAFT HEAD.

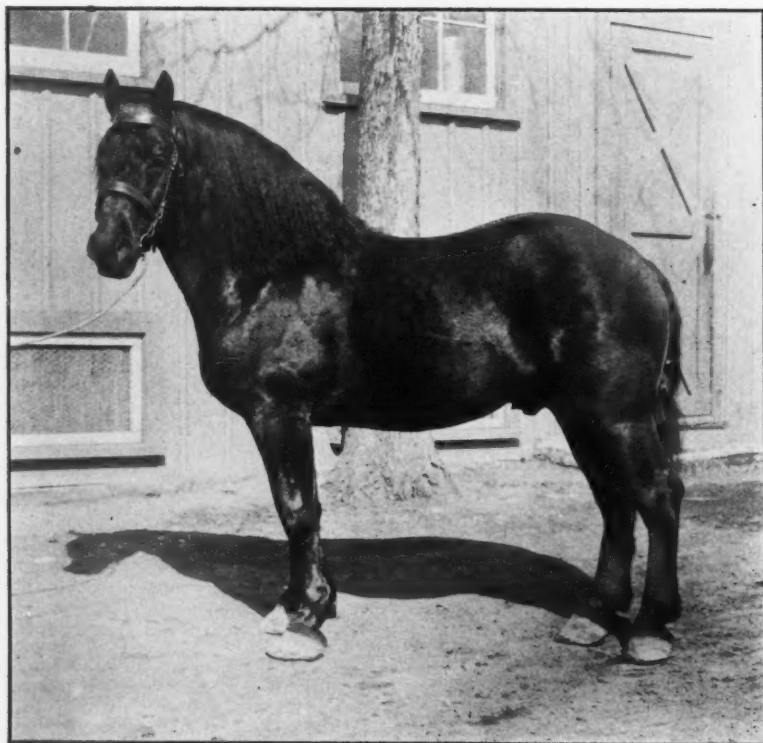
the east for consumption can not be estimated with any degree of accuracy, because a good many of the horses sold on our eastern markets are shipped south and abroad. Last year there were five carloads of horses shipped into Ithaca, N. Y., and sold, most of them going to farmers. The money paid for these horses was distributed among the railroads, for transportation, the horse salesmen for commission, and the western farmer for breeding and rearing the horses. The special point to which I wish to direct

sumed. From this there can be no other conclusion but that the east can buy horses from the west cheaper than it can raise them. When we analyze this conclusion we note two peculiar circumstances. First, we note that these horses are raised on land which is comparatively high priced and consumed in land comparatively low priced. This is the reverse of what should be, and adds one more difficulty to the situation. The second circumstance proves more fruitful. We have already noted that there are few

heavy horses east and that this is the sort of horse the west is raising. Now we are face to face with a condition from which there can be no escape. The east is raising a few light horses and buying many heavy ones from the west. The east is attempting to raise one class and is buying another. This is the exact key to the situation. At best it is expensive to raise animals for which there is no need.

There is an old adage which runs "it is a long road that has no turning" and ours is not a long one. The east is at last beginning to realize that it is trying to produce a type of horse for which there is no need and is taking

much interest in the production of heavier horses. Any change of this nature must of necessity be slow, as there is no heavy breeding stock in the country and it will take some time to get stocked with heavy breeding animals. While there are many difficulties being encountered yet, a new day is dawning and there are many heavy animals making their appearance throughout the country. Heavy horse production is soon to become a fixed industry in the east. From this there can be no escape. Circumstances alter case. In the east circumstances have arisen which makes the heavy drafter imperative.



THE FOUR-YEAR OLD PERCHERON STALLION RECENTLY PURCHASED BY THE  
NEW YORK STATE COLLEGE OF AGRICULTURE.

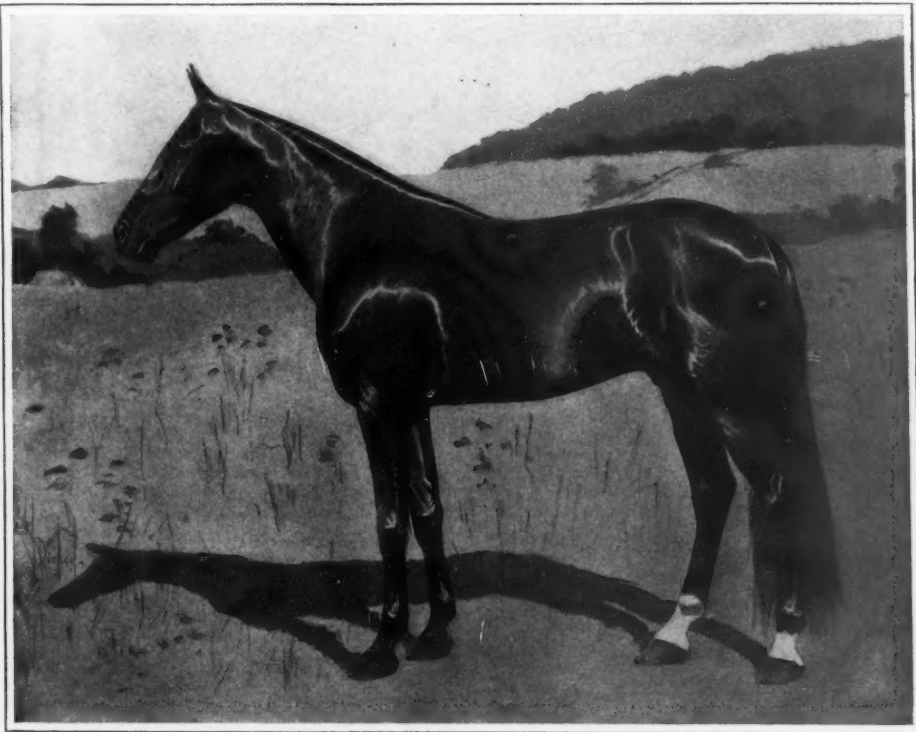
## BREEDING THE TROTTER

By L. B. Gable, '06

As the American Standard Bred is the only breed of horses so far produced on this continent, the only breed whose present excellence is due wholly to the American breeder, it is quite natural that they have entered more largely into the pleasures and uses of the American people than any other class of horses.

of the trotter is one of the best business propositions on the farm. The large Kentucky Trotting Studs head all other classes of horse or live-stock breeding establishments from the point of interest on investment.

Every farmer should have at least one team of well bred, standard bred, trotting mares, which, if rightly



ARION—2.07 1-4, WHO SOLD FOR \$125,000 AS A TWO-YEAR-OLD

Permission secured by Author,

Just at present the trotter occupies a position about equally divided between utility and pleasure and is rapidly gaining popularity, especially in the former class.

Under the present demand for high-class horses, the breeding and raising

handled, will make him more money than any other class of horses. If properly selected and intelligently handled they will do more *farm* work than a team of any of the draft breeds.

First, you want good, big, sound, record mares, good headed, good





Permission secured by Author

AXTELL—2.12, WHO SOLD FOR \$105,000 AS  
A THREE-YEAR-OLD.

gaited, and with plenty of nerve force, mares who come from the colt-trotting families and whose pedigrees can be traced to their 6th or 8th dams. Breed these mares with a fashionably bred horse, a colt-race winner and a proven sire. I don't believe in be-

coming "wedded" to any particular theory or any particular set of blood lines, except that to get the best, you must of necessity breed to the best.

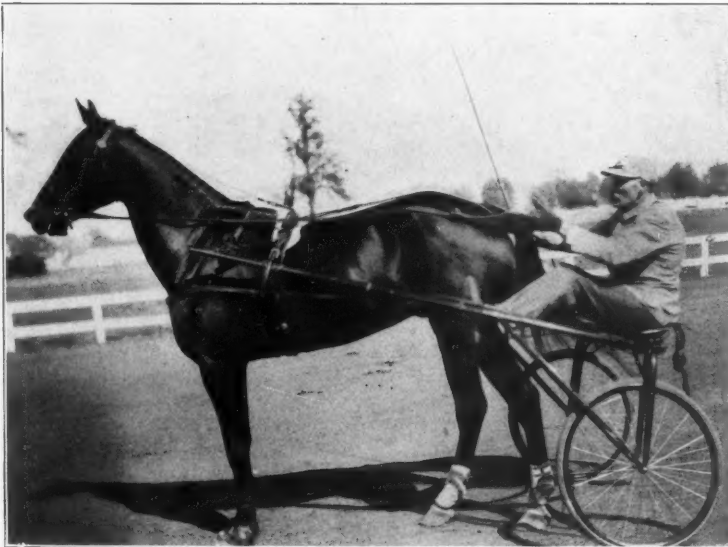
Colts bred right will always be in demand as weanlings and yearlings and at a much better price than the best specimens of finished drafters will bring at four or five years. The Walnut Hall Farms recently sold forty-seven unbroken two-year-olds at auction for an average of \$650.60. Looks pretty good, doesn't it?

The breaking of the weanlings and handling of the yearlings (which comes in the fall) fits in well with other farm work. If you have a light cart and a quarter of good road you can tell how well they are going to "step along" before they are eighteen months old. If you don't think your colt will make a race horse you can still command the high dollar as he will be well grown, broken and mannered. If he is a "trotter," develop him and a high class one may come



Permission secured by Author

ABBIE STRATHMORE—2.07 1-4 AND LADY KNAPP, 2.09 1-4, DOING ORDINARY FARM  
WORK EVERY DAY ON THE FARM OF MR. M. W. JOHNSON, ASSUMPTION, ILL.



Permission Secured by Author

UHLAN, 2.02 1-4. WORLD'S FAMOUS CHAMPION TROTTING RACE GELDING.  
HE SOLD FOR \$35,000.

your way that will sell from \$2,000 to \$20,000.

Space forbids statistics or it could be shown how some fortunes have been made breeding trotters.

Arion sold for \$125,000, as a two-year old.

Axtell sold for \$105,000 as a three-year old, and is said by good authorities to have earned nearly double that amount in stud fees.

Dan Patch sold for \$60,000 and earned just four times that amount in exhibitions. We have an old mare here who has produced over \$30,000 worth of colts and she is only one of hundreds. It would have taken close to a million to have bought all the colts from such mares as Beautiful Bells, and Lady Bunker.

Another bright feature is that the export-trade is rapidly growing and the foreigners are willing to pay

fabulous prices if they "get the goods."

The trotter has shaken off the gamblers and is rapidly getting into the hands of the best people in the land. The interest given them by such men as Mr. W. E. D. Stokes, Mr. Harkness, Mr. Allen, Mr. Schultz, Mr. Simpson, Mr. M. W. Johnston, proves their worth.

After all the success of any business depends on the man. There never was a great business establishment that was not a monument to some big, strong character behind it. My advice to every young farmer is to handle a few trotters along honorable business lines and if you should "get away bad," just remember that as dear old Professor Roberts has said—"the school of experience demands a big tuition and the University of Hard-knocks is not supported by the state."

## THE ARMY MULE

*Captain E. L. Phillips*  
13th U. S. Cavalry

**T**HE Army Mule has a reputation. So has the war horse. But their reputations are different. The horse has ever been famous in story and song. He has been depicted on canvas and in marble and bronze. He is the neighing, animated, prancing steed, hurrying his rider on to victory; or the straining, bounding, giant-muscled animal of the artillery, rushing the heavy guns into action. But the poor Army Mule! To the popular mind his name suggests but one idea,—that of a battering ram, whose "danger space" is of wonderful extent, and a peril alike to friend and foe. Nevertheless the work of the Army Mule is of such extent and importance that he is entitled to a fair share of credit, and to a reputation far more glorious than he at present enjoys. His task is to provide for the others. The attainments of both soldiers and horses in warfare are dependent upon proper supplies of food and munitions of war; without these they are worse than powerless. Whenever the system of supply fails, demoralization and retreat become inevitable. The railroad of course generally forms the basis of the system, and serves to bring the supplies into the theatre of operations; but with the vast numbers, wide dispersion and rapid movement of the units of the modern army, it is still a vast problem to distribute the supplies from the railroad centers to the armies in the field; for they must be delivered to the men and horses in their positions or wherever their work has called them. Again, in many cases the operations extend into wild or mountainous regions where railroads do not exist; and often, indeed, where not even wagons can go, and the pack mule becomes the only possibility.

Mention is made of the use of the

mule in warfare in very early times. In the conquest of Grenada during the reign of Queen Isabella II, the mule and the burro were used almost exclusively for the supply of the Spanish army, there being one of these animals engaged for every three or four soldiers. It is interesting to note that in General Grant's Wilderness campaign, though wagons were used, the number of draft mules numbered one for every five soldiers. In the numerous campaigns of the British in India, Africa and elsewhere, the mule has played a conspicuous part, and has done his full share in the building of the great British Empire. In the history of our own country the accomplishments of the Army Mule may fairly be said to eclipse all previous records of army service. He has played no small part in the conquest of the Indian, in the pushing of the frontier to the westward, in the preservation of the Union in the great War of the Secession, in the defeat of Spain, and in the restoration of order in the Philippines. In some countries where distances are short, roads are numerous and excellent, and the mule is little known, the horse is favored for the wheel transport of the army. But where the work is trying and the strong qualities of the mule have been discovered, he has steadily grown in favor. In our own country he has long since displaced the horse almost completely in all the heavy and difficult fields of army transportation service. Only with ambulances and light passenger vehicles does the horse find a permanent place.

The work of the Army Mule is of two distinct kinds, the wheel transport and the pack transport. Wagon transportation predominates, of course, under all circumstances that admit of its use. In the early and Civil War periods, and during the Indian cam-

paigns on the frontier, the wheel transportation was represented largely by the six-mule wagon. It was a heavily constructed wagon capable of carrying a heavy cargo over any road that a wagon could traverse. The sides were high, and wooden bows over the top supported the canvas cover that protected the load from rain and weather. No cargo space was sacrificed to provide a seat for the driver, for his place was on the back of one of the mules of the team. The six mules were arranged according to size, the smallest pair being in front as "leaders" and the largest were on the wagon pole as "wheelers." The near wheel mule carried the driver's saddle, and from this position he guided and controlled the team. This was accomplished by means of a single long strap called the "jerk line," running to the lead mules. A steady pull, or a succession of jerks, served to indicate to the leaders which direction to take, and the others had to follow as a matter of course. The "jerk line," however, was supplemented by the "mule skinner's" long whip, and by a most wonderful vocabulary of profanity. In case of need the wagon break was operated by another strap attached to the break lever.

The old six-mule wagon, formerly so much in evidence in the Army and on the frontier, is now but seldom seen. With more railroads and better wagon roads and a desire for greater celerity of movement, the former type has been largely replaced with the so-called "escort wagon." This is a vehicle similar in general construction, but somewhat smaller and lighter, and using a team of four mules only; for light garrison service sometimes but two. The driver occupies a seat on the wagon in the usual way, and controls the team by means of the ordinary double driving reins of the four-in-hand. The whip remains, but with the passing of the rugged character who was the "jerk line" mule driver of the old frontier days the vocabulary has lost much of its picturesqueness and vigor.

The other phase of the mule's work

in warfare is that of the pack animal. From the earliest times the horse and the ass have been used for transporting burdens placed directly upon the animal's back. For this service, however, the horse has never been very satisfactory. For such work a smaller, hardier, sure-footed and patient animal is demanded. The ideal pack animal is the small or medium sized mule. Possessing most of the desirable qualities of his sire, the ass, he is larger and stronger, and can carry a greater load.

In early times, and in some countries to the present day, the pack animal carries his load in two baskets suspended one on either side. For very light loads this primitive method serves very well, but for general freight service some type of pack saddle is a necessity. The pack saddle that has been of so much value in our service is the Spanish *aparejo* (pronounced, ap-pa-ray-ho). It is believed to have originated among the Arabs. At any rate it was introduced into Spain by the Moors at the time of their invasion. By the Spaniards it was taken to the New World, where it played a most vital part in the conquest of the native races inhabiting the roadless and undeveloped regions of Mexico and South America. Our own army acquired the *aparejo* and the packer's art from the Mexicans, by way of the "greasers" and frontiersmen of the southwest. The pack service reached its highest development in the days of the Indian campaigns before and after the Civil War. The splendid civilian pack service organized out of Mexicans and frontiersmen could keep up with the troops when following the trail, and could go wherever cavalry could go. Without this service it would have been impossible to hunt the Indians down or follow them into their mountain fastnesses.

With the cessation of Indian fighting the pack service was allowed to decline. In 1898, the Cuban, Porto Rican and Philippine campaigns again created a demand for this kind of transport. The few trains that had been kept up were wholly inadequate

to meet the requirements, and many new ones had to be organized. This proved somewhat difficult, owing to the scarcity of the old time packer, and many new men had to be trained to the work, which requires much skill and experience in handling mules.

There is an auxiliary branch of the pack service that is steadily growing in importance. This is the use of the pack mule in mountain gun batteries and machine gun companies. The

efficiency, durability and economy. He shows superior endurance, especially under hard and severe conditions and short forage. He is patient under heavy burdens, surefooted on dangerous and difficult roads, and the hard serviceable hoof which he inherits from the ass stands the wear and tear of service to a remarkable degree. Notwithstanding the rougher usage the records show that the average period of service of the mule exceeds that of



THE ESCORT WAGON, NOW IN GENERAL USE.

guns are taken apart and carried on the backs of the animals by means of specially designed pack saddles; but in an incredibly short space of time the guns can be removed and assembled ready for action. And the pack mule is also becoming an important factor in the distribution of ammunition to troops during the engagement.

The regular pack transportation service for freight is organized into pack trains. A train consists of fourteen men, including the packmaster, cargador, blacksmith and cook; fourteen saddle mules, fifty pack mules, and one "bell mare." Wherever the latter is lead all the mules will follow. As each pack mule can carry 250 pounds, such a pack train can transport about six tons twenty-five or thirty miles per day.

The qualities which have given the mule his preeminence in the military transport service are along the lines of

the horse in our army by two years. And he performs his harder work on a forage ration that is materially less; for while both get fourteen pounds of hay per day, the mule draws but nine pounds of oats while the ration of the horse is twelve pounds. At the present price of oats this item alone means a saving of about twenty dollars per year per animal.

In certain parts of the country, particularly the middle west, the farmers have come to recognize the value of the mule, and he is used extensively in farm work. That he is not more generally used is believed to be due partly to prejudice, and a reputation to which he is not fairly entitled. It has happened that the Army Mule has generally fallen into the hands of rough men, while the training of the army horse has been under the guidance of expert horsemen who have insisted upon kind and rational treat-



ment and handling. Had the army mule been always subjected to like conditions it is possible that he would now enjoy a better reputation for tractability and kindness toward mankind.

The best mules are bred in the middle west, from which region the army draws its chief supply, the State of Missouri, I believe, furnishing the larger number. For its mules the government pays a price at least equal to, and oftentimes higher than is paid for a good horse of equal size and

weight. For the four-mule teams the government specifications call for a mule from 15 hands 1 inch to 16 hands high and weighing from 1050 to 1200 pounds. For the pack service a smaller type is used, weighing from 850 to 1,000 pounds, and measuring from 13 hands 3 inch to 15 hands, the mountain batteries and machine gun companies using the larger sizes. For the Army Mule the government is now paying from \$219.00 to \$233.77, according to size, for draft animals, and \$202.45 for pack mules.



A GOOD PACK MULE.

## THE NEED OF HORSE BREEDING LAWS IN NEW YORK STATE.

*By Hobart C. Young, '10*



NE thing is certain, that a few western states raise by far the largest per cent. of draft horses (the type most profitable for the general farmer to raise) that go on sale in the large city markets of New York State. Why is it that so few native bred horses are found upon these markets and why is it that those few which do find their way there are knocked down at a lower figure than the western horses? These are questions concerning which the farmer in New York State who is at all interested in horse production may well ponder. It is a question not contested by anyone who has given the matter any study that the breeding of large draft horses of good quality for which such high prices are paid is a profitable business. There is no reason why the New York farmer should not reap the profits of this business as well as his western neighbor.

I am familiar with conditions as found in the western part of this state and a somewhat smaller region in the center of the state. These regions are supposed to be and are good farming communities inhabited by an intelligent class of farmers, nevertheless I have seen men with reputations as first-class farmers and stock-feeders breed a well-formed, sound, grade mare of the percheron type, weighing perhaps 1300 to 1500 lbs. to a trotting or Morgan stallion with the idea foremost in their mind that they are going to get as a result of this cross a horse that is a medium between the two types represented in the parent stock. They are looking for what they term a general purpose horse. This may work in some instances but never with any degree of certainty.

I have also seen men of this class breed an old mare whose vitality is nearly spent, saying that she is of not much use to work but that she ought to raise a good colt. Such a mare cannot raise as good a colt as one which has not lost her strength. Later, I have seen these same men after having made a failure of breeding say with much firmness that there is no money in horse-breeding. I say there is money in horse-breeding. There surely is a place on the eastern farm for good grade or pure-bred draft mares that can be utilized for both work and breeding purposes. But in order to insure success the breeders must select good mares and mate them with pure bred stallions of the same type. Then he must give to the mare during the period of gestation a reasonable amount of care and feed and handle the resulting colt with a reasonable amount of common sense.

Now I do not wish it understood that I believe in only draft horse breeding in this state because I think that there is money in the breeding of other types, for the general farmer; however, the draft type is undoubtedly the best venture. What I do wish to urge is that more attention be paid to the mating together of horses of the same type.

Throughout the great horse-producing states of the west including Wisconsin, Iowa, Kansas, Montana, Nebraska, and the Dakotas may be found efficient laws relating to stallions kept for public service within their boundaries. These laws have all been enacted within a comparatively few years. In many respects they are founded on the same principles as the legislation that has been prevalent with such success in some of the greatest horse-producing countries of Europe. Wisconsin was the first of the above mentioned states to pass a set of these

laws; their laws are the result of careful study of their conditions and have proven to be very successful.

The Wisconsin law deprives no man of the right to stand any sound stallion for public service. What it does enforce, however, is that any stallion owner in order to stand his horse or jack for service must keep posted during the entire breeding season copies of the license certificate of such stallion or jack containing a full account of his breeding etc., in a conspicuous place

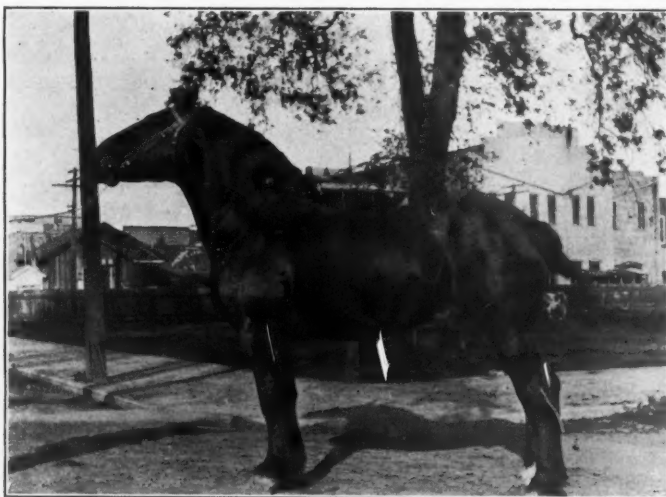
Bone spavin; ringbone; sidebone; navicular disease.

Bog spavin, curb, with curby formation of hock.

Glanders, farcy; *maladie du coit*; urethral gleet; mange; melanosis.

The licenses given out are for the following classes of horses.

First—Pure bred, for a stallion both of whose parents are pure bred and recorded in a stud-book recognized by the government and himself duly recorded in such a stud book. The



"CORPORAL" AT WOODLAND.

A good type of Percheron for farmers to use.

both within and on the outside of every building where such stallion or jack is kept for service.

Some of the main ideas of the Wisconsin law might not be out of place here.

The presence of any one of the following named diseases shall disqualify a stallion or jack for public service; Cataract; amaurosis (glass eye); periodic opthalmia (moon blindness).

Laryngeal hemiplegia (roaring or whistling).

Pulmonary emphysema (heaves, broken wind).

Chorea (St. Vitus' dance, crampiness, shivering, spring halt).

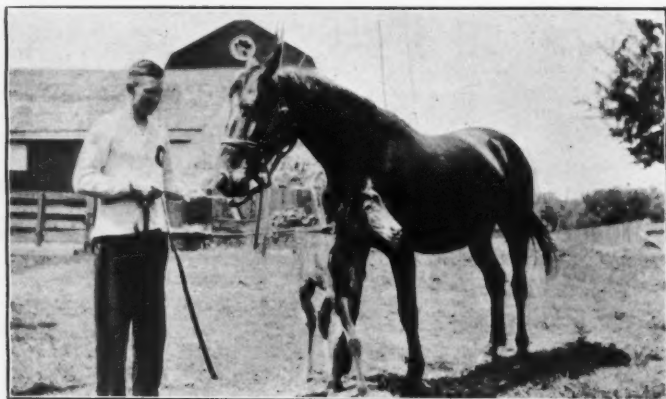
owner submits the registry certificate in applying for a license.

Second—Cross-bred, for a stallion whose sire is pure bred and recorded, of one breed and whose dam is pure bred and recorded, but of a different breed.

Third—Grade, for stallion one of whose parents is pure bred and recorded.

Fourth—Non-standard bred for a stallion that is recorded as non standard bred and not eligible to register as standard bred.

Fifth—Mongrel or Scrub for a stallion neither out of a pure bred dam or by a pure bred sire.



SOMETHING MORE THAN A MERE THEORIST

As I have mentioned above the results obtained from these laws have been very encouraging. Since the enactment of the law in January, 1906 more than 100 unsound stallions have been retired from service to the knowledge of the department, while hundreds of others have been shipped out of the state, possibly into New York State for service; who knows.

I see no reason why a similar set of laws would not be successful in this state. The general effect of them

could not but be most helpful. It would direct the minds of the breeders to the improvement of their stock, while the grade and scrub stallions that are so prevalent in this state would receive less and less patronage. When breeders wake up to the fact that a set of similar laws to those in Wisconsin would do more to further the interests of better horsebreeding in this state than any thing that has come to pass in many years we may expect to see something definite accomplished along this line.

## A TOKEN OF LOYALTY AND ESTEEM.

We print herewith a reproduction of the scroll presented to Dr. Webber on the evening of March 17th, by the members of Synapsis.

The scroll was voted immediately after the announcement that Dr. Webber would return next year to his work in the department of which he is professor.

The "Synapsis" club is made up of the plant breeding staff and graduate students taking major or minor work in the department of plant breeding. The scroll therefore betokens the sentiments of those men who have been in closest touch with Dr. Webber in his work since he came to Cornell

University. It shows that Dr. Webber is missed in his department not only because he is the executive head but also because he is the great source of encouragement and enthusiasm to all those who associate with him.

We extend congratulations to our acting Dean on receiving this scroll. We congratulate him that having managed our college through a strenuous and prosperous year during Dean Bailey's leave of absence, he will go back to his department to find a staff and a corps of students whose loyalty and enthusiasm are thus so well shown.

## Herbert John Webber

**I**n appreciation of your effectiveness, enthusiasm and inspiration as our former teacher, in recognition of your success as acting director; and with pleasant anticipation of your return to the Department of Plant Breeding, we, the members of the Synapsis Club hereby express to you our loyalty and esteem.

Arthur G. Gilbert  
H. C. Love  
Chas. F. Clark  
Eugene P. Humbert.  
L. R. Waldron  
Clyde E. Lighty  
R. Evans  
M. J. Dorsey.  
R. G. Winters  
A. B. Cowgill

Harry B. Brown.  
Leon D. Batchelor  
T. T. Odaira  
Geo. J. Bouyoucos  
A. B. Buchholz.  
K. C. Livemore.  
E. L. Heich.  
C. C. Vincent  
C. M. London  
S. P. Coker.

College of Agriculture  
Cornell University  
January, Twenty-fifth  
Nineteen Hundred and ten



## CARE OF THE EYES

[CONTINUED]

*By George M. Gould, M. D.*

## XV. STOMACH TROUBLES, BILIOUSNESS, DYSPEPSIA, VOMITING, SICK-HEADACHES, ETC.

Since time began men have been charging up to their good stomachs most of their sicknesses and sins. Whenever one has a headache—he says: “It is due to biliousness”; whenever he vomits, he says: “My indigestion!” Whenever his appetite fails or his conscience troubles him, he says: “I have so much dyspepsia!” To all of this nonsense the doctors have too often said, “Amen!” Neither they nor their poor patients have noticed that before our new civilization began the stomach and intestines of every animal and man have been given the duty of making nourishing food out of the worst sort of materials which inattention, poverty and accident could put into them, and yet the stomach kept pretty good although war, misery, and recklessness continued to abuse it. We have now an infinitely better, more nutritious, cleaner, and more constant supply of food, more properly eaten too, than ever before in the world, and still it is said, the bad stomachs and bowels, and livers are the poorest organs of the body!

When anyone hints such stupidities, tell him you have good proof that it is simply nonsense. There are few organic or structural diseases of the stomach, and most of them are caused by neglected, easily-cured, functional diseases. It is the common testimony of one of the greatest teachers and most experienced of physicians (Professor Stockton of Buffalo, N. Y.) that most of the diseases of digestion are functional, that is temporary, curable, not structural, not surgical, not incurable. Bad food and bad habits account for some of the troubles but don't let the foolish befuddle you into believing that the great majority of stomachal

and digestional diseases are due to not chewing food sufficiently, to ill-chosen diet, and all that.

What then is the cause of these very common complaints supposedly of the stomach? For over twenty years it has been proved that they are for the greater part due to eyestrain. Everybody sneered in silence. At last the conservative Professors of Medicine in the conservative Medical College of Buffalo, and University of Pennsylvania, officially and authoritatively admit the truth. But it will be twice twenty years more before the truth will be accepted and before the vomitings, indigestions, and lack of appetite, the sick-headaches of yourselves, your children, and especially those of your wives and mothers, will be cured by correct glasses.

All through the land great numbers of children are vomiting, have poor appetites, have constipation, etc., because they have eyes which need glasses to make the brain, the stomach and the liver work healthily. No amount of “dieting” or chewing the food a long time will help much if the child has unsymmetrical astigmatism. Get good spectacles and at once the vomiting, etc. will stop. This is especially true as regards what is called sickheadache, or “migraine.” Many millions of Americans have this disease and it is the cause of more suffering and tragedy than any disease in the world. It is the great cause of invalidism, and it weakens the system so pitifully that the infectious and organic diseases get an easy hold of the patient. Sickheadache is caused by eyestrain and is always curable in the young by scientific spectacles. Even in the old, after a life of suffering, great alleviation is at least sure, or the cure is

slow. But only the accurately right glasses will cure, so that no cure in those under forty years of age is a

perfect proof that the correct spectacles have not been secured.

## XVI. NERVOUS, MENTAL AND MORAL DISEASES

If we admit, as we must, that inaccurately-shaped eyes make a badly-acting brain, then it necessarily follows that diseases of the nervous system, the brain, and the mind, are caused by eyestrain. If a correct pair of spectacles will cure headache, sickheadache, and stomach troubles, then they may cure other morbid conditions of the head and of the mind. When a child for example has little lapses of consciousness, "stops for a few seconds" or faints away, it is usually because the bad eyes disturb the brain so much that they have to "stop a bit to catch up." The stoppings and faintings may become more frequent and severe or longer; or they may turn into jerkings, twitchings, etc., of the hands, face, arms, or even of the legs and feet. These things have been called "chorea," "St. Vitus Dance," "*petit mal*," etc. They may all be usually cured by good spectacles. The "falling sickness," or epilepsy, is a more intense form of the same disease, and in the young, before it has become too habitual and pronounced, may often be cured by glasses. Sometimes it is more due to lateral curvature of the spine, and then glasses and also peculiar physical gymnastics are both needed. Almost all persons who have eyestrain and are much in need of glasses complain (or friends complain for them!) of "nervousness." This is because the nervous system is literally irritated and upset by the impossible endeavor to see correctly. "Nervousness" is one of the most common of all complaints. Make "nervousness" intense and constant and it develops into many kinds of diseases of the brain and of the nerves of the body. Sleeplessness is another and frequent indication of a badly-acting pair of eyes and of the brain. "Hysteria," "nervous prostration," nervous breakdown, "gone-to-pieces," "no-good,"

"invalidism," "neurasthenia,"--people with these complaints usually need proper spectacles to save them. Most of these could still be cured by a competent oculist. There are a thousand sanitariums, and asylums homes, etc., where there might be but few if every inmate had had correction of lifelong eyestrain.

There are also many mental troubles due to eyestrain. Nothing is more common than despondency, "the blues," etc., in people who need glasses. Hundreds of students and intellectual people complain of dullness, inattention, loss of memory inability to understand and hold things in the mind, of lack of concentration, and all that, who would be as bright and studious as others if they had good glasses. Slowly and in time such persons find their mental sicknesses grow, they get into strange, morbid, and peculiar ways of acting, or feeling, or thinking, and finally real insanity results. Glasses, if of the right kind, might have prevented many people from going insane. Thousands of harassed sick people commit suicide every year because of eyestrain.

Perhaps you think it nonsense to speak of "moral disease" as being due to faulty eyes, but it is not. A vast number of criminals began their criminal life because they could not study at school, could not work at handicrafts, etc., and the real reason was that they could not see to do such things. They needed glasses to make them see well and without hurting their eyes and brain. The reformatories are filled with young people who should not be there, and who would not be there if they had been outfitted with spectacles for their studies and work. The boys play truant, often because they cannot study at school, and truancy often leads to crime.

# The Cornell Countryman

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APRIL, 1910

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## The Appropriations

Before the next issue of the COUNTRYMAN appears, the Honorable Conger and Allds will have settled their dispute (probably) and the State Legislature will have commenced to get something done. We hope that they will have done something decisive on the appropriation bill so that we can begin to lay definite plans for our new College; or if for any reason the necessary money is not forthcoming, to start another campaign of education and belief in the work being done here so that we may get it next year. The money will have to come sometime, there is no doubt of that, the work is too big and too grand for any other fate; the most serious problem is to know just which Legislature wants the honor of appropriating it the most.

Perhaps it might be well at this point to briefly review the status of the appropriations; what has been asked for and why. The bill, which has been introduced into each house

of the present Legislature and which at the time of present writing has been referred to the Committee, provides for an appropriation of \$652,000 to be used as follows:

\$50,000 for a central heating plant.

\$13,000 for a class room, laboratory building, which shall also include an auditorium.

\$90,000 for a Poultry Husbandry building.

\$245,000 for a Plant Industry building.

\$154,000 for a Home Economics building.

The overcrowded state of the present buildings is the predominating impression that everyone, who knows anything about us, has of our College. This feeling has now become so compelling, that it seems as though we must have the new buildings this year.

If we are to have any of them, we should have the heating plant. The capacity of the present one is taxed to its utmost and its enlargement is as much out of the question as its presence is a nuisance and a danger; and besides, the room it now occupies is needed for instructional purposes. Another plant is necessary, and a central one seems advisable, for separate ones in each of the new buildings would be expensive to install and costly to maintain.

The proposed auditorium is a practical necessity. The one in present use is piteously inadequate; it will not seat two-thirds of the staff and students (including the Short Course men) who are at present registered in the College. During Farmers' Week and similar occasions there is absolutely no place to give the visitors, who are by the way the supporters of the College, the accommodations they

expect. This new auditorium building would provide classrooms and laboratories for use by the Winter-Course students, and during the fall and spring would provide conveniences for advanced research work; the work which marks the real advance in agriculture.

The Poultry Husbandry building *must* come. At present the Poultry Department has no office of its own; it is temporarily squatted in rooms borrowed from the Dairy Department, and which they need badly. There are no Poultry classrooms except a small, borrowed, made-over-attic room. How they would expand if they could!

The proposed Plant Industry building will house the departments of Plant Breeding, Plant Pathology, Plant Physiology, and Plant Morphology. All these are now crowded into two or three rooms in the Agronomy building. At present the Plant Breeding department is in about the same fix in which the Poultry department finds itself. The Department of Plant Pathology is packed into a made-over-attic, and to "add injury to insult" the Departments of Farm Crops and Farm Management are justly clamoring for the room now occupied by all these departments.

The Home Economics department is the only one exclusively for women in the University, and at present it has no adequate facilities, not even a classroom. The number of students accommodated is of necessity very limited. It is proposed in the new building to include a small dormitory merely for instructional purposes. It also makes provision for a small cafeteria where the hungry students may

refresh themselves at the rate of three cents per.

Besides the appropriation for the new buildings, the College is asking for \$250,000 for running expenses, an item which will, if granted, be included in the general Maintenance Bill. Last year the College received \$185,000 in this bill and the almost frantic condition of all the departments—who haven't been able to complete their experiments, publish their bulletins, or carry on their extension work—and the big increase in the number of students to be taken care of, has justified the demand for this increase of \$65,000.

This then is the financial situation at our College; it is a mere statement of fact. It may be very ordinary reading; its excuse is its burden of truth. We hope that the Legislature will see the seriousness of the situation and do all in their power to relieve it. We feel confident that there is a widespread sentiment throughout the state which will not only back up the supporters of the bill, but which will compel serious consideration on the part of those who may not be entirely familiar with conditions here. We feel justified in expecting to see both houses pass the bills.

### **The Agricultural Mandolin Club**

Of all the College activities, probably the most deserving of notice is our Mandolin Club.

They have been on hand at every Assembly, Association meeting, and other College functions; they come cheerfully to play before small audiences as well as large ones. They do not come just a few at a time; a goodly number are always on hand, and they play too.

We have sometimes wondered how they have attained such excellence: it is seldom achieved by a club of one College in a University. Indeed, we do not know that any other College in Cornell even claims to have a musical club. But if one should happen up to the buildings about twice a week at or after seven o'clock, then he would know why the Agricultural Mandolin Club has succeeded. They have practiced; practiced faithfully and to good purpose.

We are as proud of our Mandolin Club as we are of our athletic teams; and they deserve our admiration just as much, for do they not work even longer and give us pleasure on more occasions? At present the members of the club do not receive any official recognition. They don't even receive a shingle. Maybe some day we will wake up to the fact that those medals represent a reward of success and should go where success has been attained. When that time comes, we will cease to present them as payment for "coming-out-for-the-team." Doubtless there are two sides to the medal question, but in absence of other token we congratulate you, the Agricultural Mandolin Club, on your success. May good deeds be, in part at least, their own reward.

### Back Issues

The Librarian of the Agricultural College would like to secure copies of the CORNELL COUNTRYMAN—Vol. 3, No. 4, (Jan. '06), Vol. 3, No. 5, (Feb. '06), and Vol. 3, No. 7, (April, '06). Anyone who has any or all of these issues will confer a favor as well as receive full value by sending them to above party.

## BOOK REVIEWS

THE TRAINING OF FARMERS, by Liberty H. Bailey, Director of the College of Agriculture at Cornell University. Published by the Century Company at \$1.00 net.

The problems of rural life today are many, real, and pressing. The most important of them are incorporated in THE TRAINING OF FARMERS. Just as Burke in his speech on "The Conciliation with the American Colonies" goes to the causes, so Bailey goes to the causes of these agricultural problems and in his suggestions for the solutions of these problems, he may be said to rival Burke for sound reasoning, insight, and practicability.

The nature of the problem is first touched on, and the need of training for a farmer pointed out. Secondly, the agencies are named being principally rural and state governments, public demonstration farms, circulating libraries and organization. In connection with the latter he states that the farmer is apt to consider his neighbor more in the nature of a rival than a co-operator.

Various colleges and schools are considered at length in their relation to agriculture and the question of what a college education in agriculture means in dollars and cents is graphically worked out. In conclusion the author says "The commercial and social isolation of the farm is passing \* \* \* The farmer is rapidly becoming a citizen of the world. All his problems must have a larger treatment than they have ever had before."





## STUDENTS' ASSOCIATION

By H. M. Knox, '01, President

I WANT to bear just a word to present and former students concerning the work of the Students' Association of the New York State College of Agriculture. As mentioned in the March issue of *The Countryman*, our accepted official organ, the organization of the Association was perfected during the recent Farmers' Week. We are ready to go to work and we solicit the cooperation of all present and former students. Under the constitution, the present students and staff in the College constitute the Resident Division, with our first vice-president, who is the president of the Agricultural Association, Mr. Kutschbach, as the responsible officer. The function of the Resident Division is "to stimulate student initiative and cooperation, and the spirit of unity and loyalty; to create and maintain a high standard of student life and activity; to advance the standing of the College among the other Colleges of Cornell University and among the other Colleges of Agriculture; and such other duties as may come upon it in its relation to the College or that may be assigned to it by the Association." The Non-Resident Division is composed of all former students of the College. Its special responsibility is "to bring the benefits of the College to the people of the State by example and other means; to make suggestions looking to increased effectiveness of the work of the College; to support such movements to promote the welfare of the College and of country life interests at large as the Association may initiate or may determine to aid."

Our first task is to be the organization of county associations or chapters such as already exist in two or three counties, and through these chapters

to carry on the work of the non-resident division. The organization of our forces outside of the state has not yet been arranged for. But it is the purpose of the Association to hold together all present and former students no matter where they may be. Through our county chapters we hope to encourage the formation of reading clubs; and more especially to bring influence to bear on community activities, such as the local fair for example. The Association will be on the lookout for specially useful publications to distribute to its members; will send letters of information concerning the College to all members of the Non-Resident Division; will act as an employment agency for its members; will plan for reunions of former students of the College. As the work of the Association takes shape it is anticipated that it will find a large field of usefulness, as there are certain lines of effort which such an association can conduct better than any other.

Much of the success of the Students' Association will depend on the loyal support of its constituency. It came up spontaneously out of a gathering of resident and former students a year ago, and expressed the desire of these men for organization and association. We want it to become a strong factor in our college and business life, and in country life affairs. The Executive Committee invites a voluntary expression of support from all who are or ever have been students in the College of Agriculture at Cornell University. The life membership fee is \$2.00. A. R. Mann, Ithaca, is the secretary-treasurer, to whom fees and applications for membership should be sent.

## GENERAL AGRICULTURAL NEWS

In a letter from "an inhabitant of the Ozarks" a few whacks are taken at the express companies and their ilk. It looks to him as if the whole outfit at Washington from President Taft down, were trying to discredit the Post Office Department. He says in part: "How long could an individual or a corporation do business with 40,000 mail wagons, losing \$40,000 a day, and how long would it take a corporation to hustle for more freight to carry in those wagons? I once asked a Congressman why he was opposed to parcels post. His reply was that it would destroy our towns and small cities. If that would hold good, Europe must be without any towns now, for they have enjoyed the blessings of a parcels post for, lo, these many years. Let us keep after them until we get it."

\* \* \*

The International Conference which met in Rome in June, 1905, authorized the organization of the International Institute of Agriculture. The second number of the Bulletin of Agricultural Statistics, the official organ of the Institute, shows just what sort of work is being done. Only those statistics of agricultural products which are furnished by governments or under government supervision are used. Thus the information is as reliable as possible. Differences as to definitions and of pressing information has often caused great diversity and it is the aim of the Institute to secure greater uniformity between the agricultural statistics of countries and to make them of more real value.

It has been found necessary that some countries modify or adapt their statistical services to the plan adopted by the Institute and these countries have been instructed by showing them how information is compiled by other nations. Of course, particular conditions in a country may require particular methods.

The statistical tables furnished by the bulletin are fairly complete. They consist of comparative statements of the agricultural areas, condition and production of wheat, rye, barley, oats and maize for the years 1908 and 1909 and a comparison of the year 1909 with the years 1899-1908, in practically all the countries producing these foodstuffs.

With the right sort of co-operation, the Institute should be able to do a great work for the development of the food producing areas of the world and thus in a large measure tend to reduce the cost of living. It should occupy much the same place in the world as does the Department of Agriculture in this country. From the statistics compiled, it should be possible to determine what each area of the world is best suited to produce. The endorsements published by the Institute in the bulletin show that the value of the work is becoming widely appreciated.

\* \* \*

Little objection is being raised to the issuance of \$30,000,000 federal bonds to supply capital for completing the irrigation works projected by the national government and congress will probably authorize it.

This is the second step in the new governmental policy toward the land. The first step was when Congress set aside the proceeds from the sale of public lands to pay for the irrigation works that were to reclaim public lands. In both cases settlers are to pay back the loans over a period of years. The next step may be direct loans upon any good land to encourage better farming. There seems to be no good reason why national or state aid should be given to irrigated agriculture and not to farmers who have to work against uncertain climate or depleted soil.

When you remember that the cost of a single battleship is a sum which if loaned on farm securities would

establish thousands of thrifty families on self-supporting homesteads or if devoted to education would introduce into the public schools the instruction in agriculture and domestic science that it needs so badly, it doesn't look as though the farmer is getting a square deal.

\* \* \*

The co-operation of the railroad and the farmer has cropped out in a new form in the state of Missouri.

Out there the railroads have come to believe that anyone receiving instruction in Agriculture and settling along their lines is an economic asset. To this end the Frisco Railroad has offered forty-five scholarships at the State Agricultural College each scholarship being valued at \$100.00. One scholarship will be awarded in each county through which the railroad passes in Missouri and will be given to the young man over 16 years of age who grows and exhibits the best ten ears of corn this coming season. This corn will be grown under the direction of the college of agriculture and finally judged by an expert at a county corn show to be held in the fall.

\* \* \*

The time has come when no man should buy a large quantity of galvanized wire except on a chemist's guarantee that the galvanizing carries the proper amount of zinc. There is a chemical test which manufacturers and large consumers use known as the copper sulphate dip test, consisting in dipping the wire in a solution of copper sulphate of a certain known strength. This test involves a knowledge of chemistry and metals which puts it out of the reach of a farmer but the test is not expensive and there are many commercial chemists who could take half a dozen samples of wire and in a short time tell how much zinc they carried without charging the farmer an exorbitant price.

\* \* \*

"Outlines of Agriculture for Rural Schools" by Prof. C. M. Evans of Lenox College, Iowa, tells just how to go about teaching the principles of

Agriculture to the children from the farm. The book is very practical having many illustrations. It does not plan to spend much of the regular school time to this sort of work, one afternoon a week being thought sufficient, but the course is made as attractive as possible.

The great objection to the introduction of this work in the rural schools has been the difficulty of getting competent teachers. Most of the teachers in the country are graduates of city high schools and they could hardly be expected to have practical information to offer children on the farm. The plan outlined means to draw upon the knowledge of the children's parents for the real facts and thus supplement what the youngsters learn at home.

The Bulletins of the experiment stations would be used as text books and the materials for study would be found on a surrounding farm.

\* \* \*

The wart disease is a new enemy of the potato crop which is attracting great attention in Europe, and which is liable to be introduced into the United States at any time. It affects the tubers, forming large, rough, unsightly warts, and, in severe attacks, completely destroys the crop. Once the fungus gets into the soil, it is impossible to grow a crop of potatoes on the land for several years.

The fungus which causes this disease was discovered in 1896 in potatoes grown in Hungary. It is now prevalent in many places in England and there is great danger that it may spread to Ireland. It is also found in Germany and some other European countries. It has been carried to Newfoundland, but has not yet appeared in the United States.

It is spread by using affected potatoes for seed, and, as this country imports considerable quantities of potatoes every year, there is danger that it may be introduced.

The U. S. Department of Agriculture has recently issued a circular (for free distribution) giving a brief account of this disease.



## CAMPUS NOTES

The regular Assembly of the College of Agriculture was held on March 3. The meeting was opened by the singing of the Alma Mater, followed by several enjoyable selections by the Glee Club and Orchestra. The principal address was given by Dean Albert W. Smith of Sibley College. After tracing the relation between Agriculture and the Mechanic Arts, he advocated the furtherance of Inter-College activities, as a branch of sports which give opportunity for the great majority of students to participate in. He ended by bringing a message of good-will and co-operation from Sibley College. Mr. Peck then rendered a vocal solo, accompanied by Miss Egbert at the piano. The next number was a very interesting lecture on Plant Life in Florida from the personal experiences of acting Dean Webber. The Assembly was closed by the singing of the Evening Song, followed by a social hour and refreshments.

\* \* \*

An athletic rally of the students in the College was held on Tuesday, March 8, and what was lacking in numbers was made up for in enthusiasm. The meeting was opened by the singing of the Alma Mater. The Glee Club and Orchestra then rendered several selections. These were followed by a talk on Inter-college Athletics by Professor Craig, a talk on track by H. C. Young, '10 (Captain Varsity Track team), on Crew by F. B. Kelley, '10, who rowed

No. 3 on the victorious '09 Varsity eight, on Soccer by A. C. Towers, '10, (Captain Varsity Soccer Team), and an address by Coach Coogan (Coach Varsity Baseball team). These were followed by the presentation of medals to the teams of last year and this year by Acting Dean Webber. The Evening Song concluded the meeting.

\* \* \*

At a meeting of the *Cornell Countryman* Association held before the mass meeting on Tuesday, March 8, K. B. Lewis, and L. E. Johnson, '10, were elected members of the nominating committee for the *Cornell Countryman* Board.

\* \* \*

Agriculture has 32 men out for crew. M. E. and C. E. are ahead with 50 men each. The crews will have two whole months on the water this year, in contrast to the week which they have had in years past.

\* \* \*

In the Short Course Debate series on the question—*Resolved*, that the state will receive more benefit from money expended in experimental forms than they would in education in secondary schools—, Poultry defeated General Agriculture; Dairy defeated Horticulture; Poultry defeated Horticulture. Poultry thus won the series.

\* \* \*

A ten days short course was held by the Department of Dairy Industry from March 1 to March 11. Twenty-eight men, all being factory and cream-

ery managers who had been in charge of factories, attended. There were two lectures each morning, with laboratory practice in testing, butter making, cheese making, and bacteriology in the afternoon. The purpose of the course was to enable men from the factories to get the latest information concerning development in dairy work. These twenty-eight men have formed a club with regular officers, and are going to adopt a uniform system of factory accounts. These accounts

Farmers' Institute at Morrisville on Wednesday and Thursday, March 9 and 10. Professor Mann attended a Farmers' Institute meeting at Hamilton on March 8.

\* \* \*

Dean Webber attended a Board meeting of the new school of Agriculture at Morrisville on March 12.

\* \* \*

A meeting to form a bacteriological society was held on March 11. H. W. Redfield of the chemistry department



OUR MANDOLIN CLUB

will be sent to members for comparison.

\* \* \*

On Wednesday, March 16th, the Poultry Association held a meeting in the Horticultural lecture room. Mrs. George Manroe of Cortland, who is a State Lecturer, gave a very interesting address on Farm Sanitation, followed by an informal discussion of the subject. The Mandolin Club gave several selections. Refreshments were served at the close of the meeting.

\* \* \*

Miss Van Rennsleear and Professor Mann attended the close of the

was elected president, H. J. Conn was chosen treasurer and secretary, with Dr. Boynton as vice-president. The next meeting was fixed as March 18, with two meetings a month thereafter, every second and fourth Friday.

\* \* \*

The basketball team ended its season in second place among the colleges. This puts the Agricultural College on a tie with C. E. for the inter-college championship.

\* \* \*

Prof. H. H. Whetzel, of the Department of Plant Pathology spent the week of March 7th to 12th at Kent,



Ohio. He gave a series of six lectures there before the students of the Davey School of Practical Forestry. This school is maintained for a period of four months during the winter for the instruction of young men employed by the Davey Tree Expert Co. The lectures were along the lines of the diseases of shade and forest trees. The botany and plant pathology work in this school is in charge of Mr. W. H. Rankin, of Wabash College, Crawfordsville, Indiana, who completed his work in that institution January first. Mr. Rankin was special assistant in the Department of Plant Pathology here last summer being employed on the ginseng investigation work. Mr. Rankin will return to

Cornell at the close of the work at Kent, April first, to take up graduate work in the Department of Plant Pathology. He expects to undertake investigation along the line of heart rots of shade and forest trees.

\* \* \*

On Tuesday, March 15th, 1910, Mr. and Mrs. E. S. Savage, 802 University Ave., Ithaca, were honored with a caller who has come to stay, and they have decided to call her Ruth Cecilia.

We congratulate Mr. and Mrs. Savage most heartily.

Mr. Savage has been connected with the Department of Animal Husbandry for three years.

### FORMER STUDENTS



CHAS. F. SHAW

'06, B. S. A.—Charles Frederick Shaw was born in West Henrietta, New York, in 1881. He prepared for college at Starkey Seminary, Lakemont, New York, and entered Cornell in 1902 graduating with the class of

1906. He completed his college course in three and one-half years, and in February, 1906, entered the employ of the U. S. Department of Agriculture as a Scientific Assistant in the Bureau of Soils. He assisted in the survey of soil areas in Louisiana, Arkansas, and Texas until January 1907, when he was assigned to special duty as instructor in soils at the Pennsylvania State College, for three months. During the summer of 1907 he carried on a survey of the Center County area, Pa., and in September of that year took up work at the Pennsylvania State College as Instructor in Agronomy, in charge of instruction in Soils. In June 1909 he was promoted to the rank of Assistant Professor of Agronomy, a position which he now holds.

During four months of the year—June to October, he is in the employ of the U. S. Department of Agriculture as Soil Scientist, and during the summers of 1908 and 1909 has assisted in the making of a reconnaissance soil map of the State of Pennsylvania. During the coming summer he will be in charge of the reconnaissance work. In this work only the major soil differences—the

series—are shown, and large areas of the state are covered each season. In this way Mr. Shaw has gained an intimate knowledge of the soil and crop conditions over a large part of the state.

He has been active in Farmers Institute work and is one of the lecturers on the Agricultural Special Trains that have been run throughout the state.

'88, B. S. A.—Milo F. Webster, formerly of Victor, N. Y. is now secretary of the Tompkins County Co-operative Fire Insurance Company. His address is 315 East State Street, Ithaca, N. Y.

'06, B. S. A.—Ora Lee, Jr., having completed a very satisfactory "post graduate" course of four years in the Bureau of Soils, U. S. Department Agriculture, resigned from that Department on March first in order to assume the management of his father's farm located at Albion, N. Y. Mr. Lee was business manager of the COUNTRYMAN for '05-'06.

'06, B. S. A.—Ernest Kelly now Deputy State Dairy Inspector of Washington, with an office at 414 Mehlhorn Building, Seattle, Wash.,

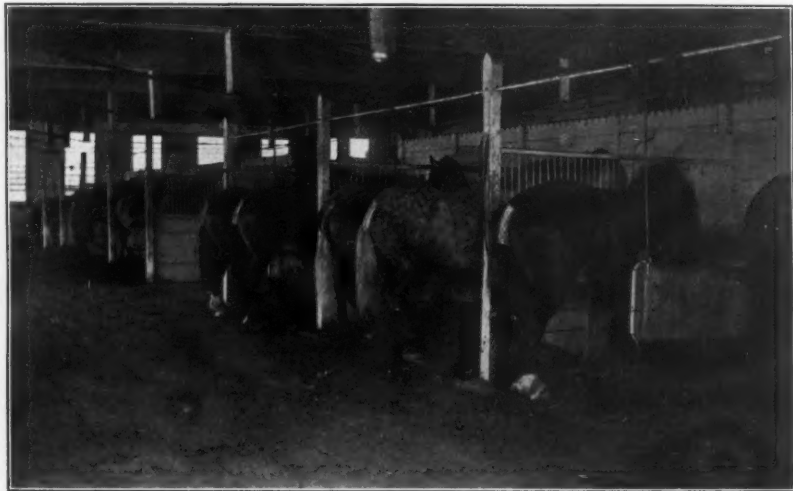
was recently married to Miss Dorrace of Maryland. He recently declined a position in the Dairy Division of the U. S. Department of Agriculture.

'08, B. S. A.—A. W. McKay who is engaged in field investigations in pomology for the federal bureau of plant industry is now located in Los Angeles, Cal. His address is in care of the Department of Agriculture, Washington, D. C.

'08, B. S. A.—J. Vincent Jacoby is now located at Bernardsville, N. J. where he is assistant to the manager of the 300 acre farm of Mr. William Chann, Jr.

'08, B. S. A.—Mrs. Hueston McCormick of Berkeley, California, announces the engagement of her daughter, Miss Jessie Sevier McCormick, to Chester J. Hunn of Ithaca, N. Y. Miss McCormick is a graduate of the University of California, B.L., 1908, and is at present teaching music and literature at the Kawaiahaeo Seminary at Honolulu, Hawaii. Mr. Hunn is Assistant Horticulturist at the Hawaii Federal Experiment Station. The wedding will take place in Honolulu in the latter part of June.

Congratulations to "Chet."



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AND		
McCABE		

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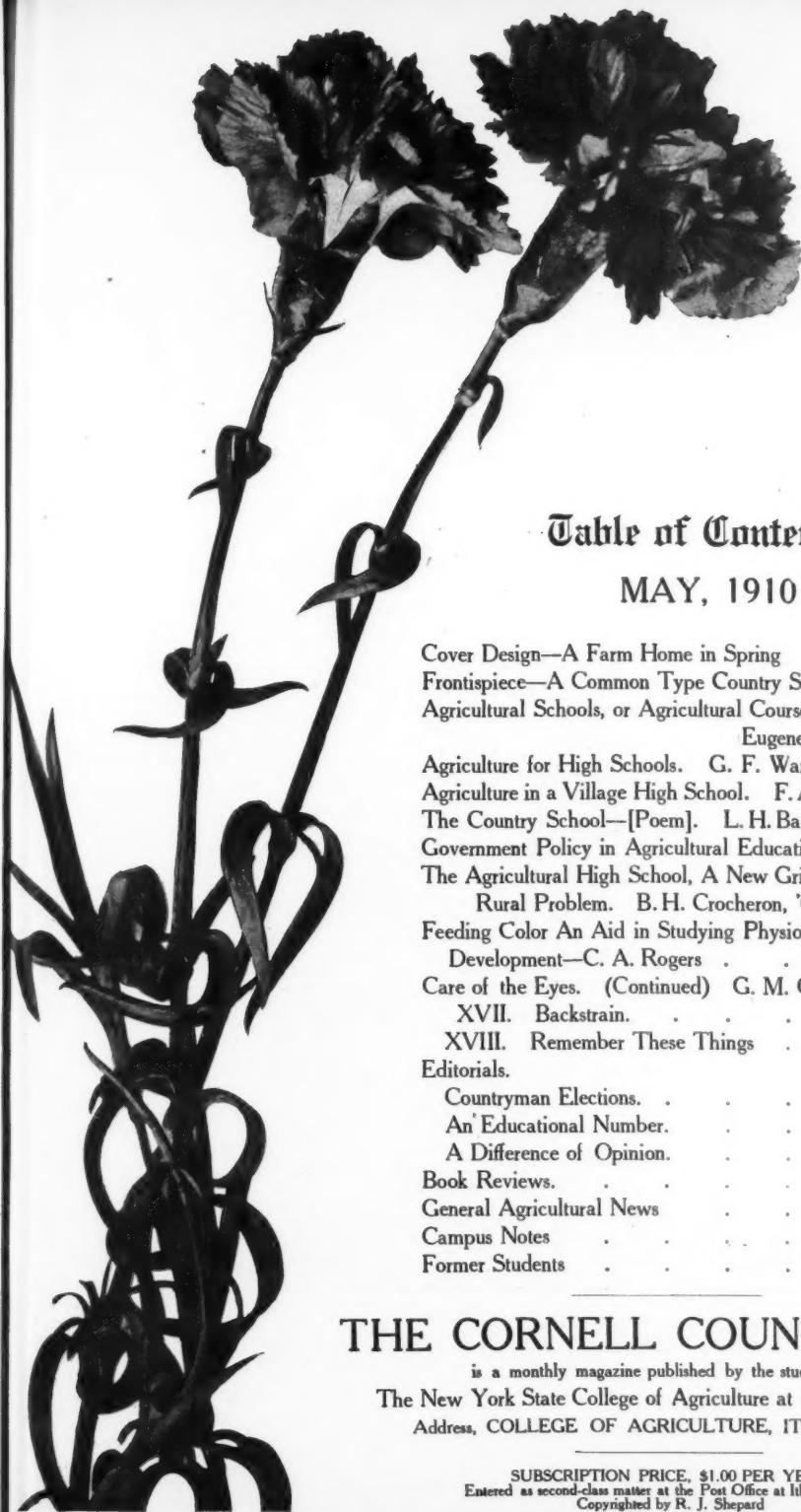
McCabe ("Shorty") is older than "Torchy," mellowed by an experience in the University of "Hard-Knocks" a graduate of the College of Modern-Shams and Smug Hypocrisy. He speaks with the wisdom of Epictetus in the vernacular of extreme modernism.

These stories are a mental cocktail.

Read them in the Magazine of

## The Sunday Courier

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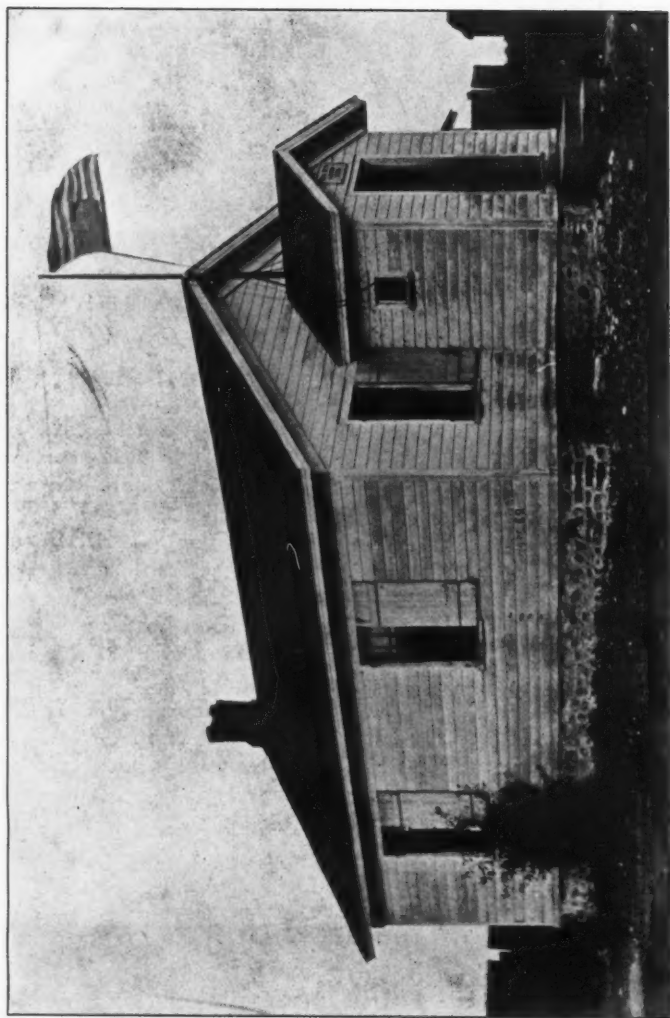
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A COMMON TYPE COUNTRY SCHOOL.

Note inverted flag, tumbled-down chimney, wooden shutters, dirty doorway. Is it any wonder that so many country children had just as soon not go to school?